

Sub 4
19. (Previously Added) A method for detecting a location of a fire within a predetermined area, said method comprising the acts of:

- (a) monitoring infrared energy within the predetermined area;
- (b) filtering out the infrared energy not within a predetermined frequency range to produce filtered energy signals;
- (c) determining existence of a fire within the predetermined area based on the filtered energy signals; and
- (d) determining a location of the fire within the predetermined area when said determining (c) determines the existence of the fire.

20. (Previously Added) A method as recited in claim 19, wherein said determining (d) of the location of the fire is performed using the filtered energy signals.

21. (New) A method as recited in claim 19, wherein said method further comprises:
(e) directing a nozzle of a fire extinguishing apparatus to the location of the fire.

22. (New) A method as recited in claim 21, wherein the location of the fire is an x-y location, and wherein said directing (e) directs the nozzle of the fire extinguishing apparatus to the x-y location of the fire by moving the fire extinguishing apparatus is both an x-direction and a y-direction.

23. (New) A method as recited in claim 22, wherein said determining (d) of the location of the fire and said directing (e) of the nozzle to the location of the fire are performed simultaneously.

24. (New) A method as recited in claim 22, wherein the fire extinguishing apparatus includes a plurality of sensors positioned around the nozzle, and the sensors detect the infrared energy.

25. (New) A method as recited in claim 24, wherein said determining (d) of the location of the fire finds the location of the fire by balancing the infrared energy received from the sensors.

26. (New) A method as recited in claim 22, wherein said method further comprises:

(f) supplying fire extinguishing agent through said nozzle when said fire is sensed; and

(g) ceasing the supply of the fire extinguishing agent through said nozzle when said fire is no longer sensed by said sensors.

27. (New) A method as recited in claim 26, wherein following said ceasing (g), said method is again ready to locate another fire by repeating said acts (a) through (g).

28. (New) A method for detecting a fire within a predetermined area, comprising:

(a) sensing infrared energy within the predetermined area;

(b) converting the infrared energy into electrical signals;

(c) filtering the electrical signals to produce filtered electrical signals which correspond to a fire; and

(d) detecting the presence of a fire within the predetermined area based on the filtered electrical signals.

29. (New) A method as recited in claim 28, wherein said sensing (a) senses infrared energy in a predetermined area, and wherein said filtering (c) filters signals in the frequency range of 5-30 Hz.

30. (New) A method of claim 28, wherein said detecting (d) comprises the (d1) comparing the filtered electrical signals with a predetermined threshold level.

31. (New) A method of claim 28, wherein said sensing (a) monitors a plurality of infrared sensors, and wherein said detecting (d) comprises (d2) determining location of a fire based on the filtered signals from the plurality of the infrared sensors.

32. (New) A method of claim 31, wherein said method further comprises (e) moving a fire extinguishing nozzle so as to point to the fire detected in said detecting (d).

33. (New) A method as recited in claim 32, wherein said method further comprises (f) releasing a fire extinguishing agent towards the fire via the fire extinguishing nozzle.

34. (New) A method as recited in claim 33,

wherein said detecting (d) detects a location of the fire, and
wherein the location of the fire is an x-y location, and wherein said directing (e)
directs the fire extinguishing nozzle to the x-y location of the fire by moving the fire
extinguishing apparatus is both an x-direction and a y-direction.

35. (New) A method as recited in claim 34, wherein said detecting (d) of the location of
the fire and said directing (e) of the nozzle to the location of the fire are performed
simultaneously.

36. (New) A method as recited in claim 34, wherein a plurality of sensors positioned
around the nozzle, and the sensors detect the infrared energy.

37. (New) A method as recited in claim 36, wherein said detecting (d) of the location of
the fire finds the location of the fire by balancing the infrared energy received from the
sensors.

38. (New) A method as recited in claim 36, wherein said method further comprises:
(f) supplying fire extinguishing agent through the nozzle when the fire is sensed;
and
(g) ceasing the supply of the fire extinguishing agent through the nozzle when the
fire is no longer sensed by said sensors.

39. (New) A method as recited in claim 38, wherein following said ceasing (g), said
method is again ready to locate another fire by repeating said acts (a) through (g).

40. (New) A method as recited in claim 38, wherein said sensing (a) senses infrared
energy in a predetermined area, and wherein said filtering (c) filters signals in the
frequency range of 5-30 Hz.

41. (New) A method of claim 38, wherein said detecting (d) comprises comparing the
filtered electrical signals with a predetermined threshold level.

42. (New) A method as recited in claim 34, wherein said sensing (a) senses infrared energy in a predetermined area, and wherein said filtering (c) filters signals in the frequency range of 5-30 Hz.

43. (New) A method of claim 34, wherein said detecting (d) comprises comparing the filtered electrical signals with a predetermined threshold level.

44. (New) A method as recited in claim 28, wherein the predetermined area is an area of a structure.

45. (New) A method as recited in claim 44, wherein the area is a room and the structure is a building.

46. (New) A system, comprising:

a fire detector that detects a location of a fire within a predetermined area, said fire detector monitors infrared energy within the predetermined area, filters out the infrared energy not within a predetermined frequency range to produce filtered energy signals, determines existence of a fire within the predetermined area based on the filtered energy signals, and determines a location of the fire within the predetermined area when the existence of the fire has been determined; and

a fire extinguishing agent that supplies fire extinguishing agent toward the location of the fire when the existence of the fire has been determined and ceases supply of the fire extinguishing agent toward the location of the fire when the existence of the fire is no longer detected.